Title (en)

GAS TURBINE TOPPING IN SULFURIC ACID MANUFACTURE

Title (de)

GASTURBINENVORSCHALTUNG BEI DER SCHWEFELSÄUREHERSTELLUNG

Title (fr)

PRODUIT DE TÊTE DE TURBINE À GAZ DANS LA FABRICATION D'ACIDE SULFURIQUE

Publication

EP 2069233 A4 20100106 (EN)

Application

EP 07815846 A 20070919

Priority

- CA 2007001653 W 20070919
- US 84551406 P 20060919

Abstract (en)

[origin: WO2008034229A1] A sulfur-burning combustor generates hot sulfur dioxide that is mixed with dry air or recycled sulfur dioxide to form a mixed working gas for a gas turbine to ensure that the temperature of the working gases is kept below the maximum allowable temperature of the blades of the turbine. The turbine drives an oxygen compressor which supplies oxygen to a bubbling chamber which also receives S8 to produce sulfur vapor (predominantly diatomic sulfur) for combustion. By using stoichiometric quantities, the end product, sulfur dioxide, is delivered in requisite quantities to a sulfuric acid plant without any harmful emissions. Useful amounts of electrical power can thus be generated by the gas turbine (topping device) as well as the downstream steam turbine by harnessing the enormous amount of waste heat involved in the manufacture of sulfuric acid.

IPC 8 full level

C01B 17/50 (2006.01); **C01B 17/74** (2006.01); **F01K 7/16** (2006.01); **F01K 21/04** (2006.01); **H02K 7/18** (2006.01)

CPC (source: EP US)

C01B 17/54 (2013.01 - EP US); **C01B 17/76** (2013.01 - EP US); **F02C 3/30** (2013.01 - EP US); **F02C 3/32** (2013.01 - EP US); Y02P 20/129 (2015.11 - EP US)

Citation (search report)

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- [A] JP S60191007 A 19850928 - ISHIKAWAJIMA HARIMA HEAVY IND
- [A] EP 0669390 A2 19950830 - KEMIRA KEMI AB [SE]
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- See references of WO 2008034229A1

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